

WHAT IS CLAIMED IS:

1. A circuit to drive a light source that includes a discharge tube, the circuit comprising:

a control device to drive the light source and to switch the light source to a plurality of lighting modes including a rated power mode and a power saving mode, the control device including a lighting mode setting unit to set the lighting mode to one of the plurality of lighting modes, and a rated power supplying unit to supply a rated power to the light source at the lighting starting time of the light source until a halogen cycle of the discharge tube is stabilized, and that switches the light source to the lighting mode set by the lighting mode setting unit after the halogen cycle of the discharge tube is stabilized.

2. The circuit for driving the light source according to Claim 1, the switching between the plurality of lighting modes being performed for one or more seconds.

3. The circuit for driving the light source according to Claim 2, the switching between the lighting modes being performed by gradually changing the power.

4. The circuit for driving the light source according to Claim 2, the switching between the lighting modes being performed by linearly changing the power in switching.

5. The circuit for driving the light source according to Claim 2, the switching between the lighting modes being performed by changing the rate of change of power with respect to time in a curvilinear fashion.

6. The circuit for driving the light source according to Claim 1, the circuit further including an inverter bridge to convert input direct current into alternating current.

7. A projector to modulate light beams emitted from a light source according to image information to form optical images, and to enlarge and protect the optical images, the projector comprising:

the circuit according to Claim 1.

8. A method of controlling the lighting of a light source, which is executed in a circuit to drive the light source that includes a discharge tube, the circuit including a control device to drive the light source and to switch the light source to a plurality of lighting modes including a rated power mode and a power saving mode, the method comprising:

setting the lighting mode to one of the plurality of lighting modes;

supplying a rated power to the light source at the lighting time of the light source until a halogen cycle of the discharge tube is stabilized; and

switching the light source to the lighting mode set in the setting of the lighting mode after the halogen cycle of the discharge tube is stabilized.

9. A computer readable program for executing a method of controlling the lighting of a light source, the method being executed in a circuit to drive the light source that includes a discharge tube, the circuit including a control device to drive the light source and to switch the light source to a plurality of lighting modes including a rated power mode and a power saving mode, the program comprising:

a program for setting the lighting mode to one of the plurality of lighting modes;

a program for supplying a rated power to the light source at the lighting time of the light source until a halogen cycle of the discharge tube is stabilized; and

a program for switching the light source to the lighting mode set in the setting of the lighting mode after the halogen cycle of the discharge tube is stabilized.